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INFORMATION REPORT

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SUBJECT Miscellaneous Information on Chemical
Plants at Severo-Donetsk and Verkhneye, USSR,
and the Leuna and Huels Plants in Germany

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The Don Soda plant is not located in Lisichansk (48-50N, 38-22E) but about
two miles southeast of Lisichansk, along the Donetsk River, in the town of
Verkhneye. The name of the railroad station is Pereyezdnyaya.

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[redacted] it produces soda, because 50X1-HUM
prisoners-of-war concealed baking soda in their food canisters
and smuggled it from the plant. Soda, as a result of the Five-
year Plan, was actually scarcest in the town where it was pro-
duced. [redacted] 50X1-HUM

strong chlorine odor surrounding the chlorine plant in Aussig,
Czechoslovakia. [redacted] 50X1-HUM

4.

[redacted]
[redacted] never heard that they are hydroforming petroleum stocks
in the USSR refineries. Prof Borlyakov, at the Karpov Institute,
was very much interested in catalytic cracking, [redacted] 50X1-HUM

5.

6.

7.

The methanol and ammonia plants were in most respects independent,
but at Leuna the compressors were the bottlenecks in production,
and these compressors were used for dual purposes. There were,
of course, other tie-ins to provide the flexibility in operation
required in any large plant.

8.

[redacted]
[redacted] in order to have a going plant
concern, the Soviets selected the best and most modern pieces
of equipment. If the remaining pieces were sufficient for con-
tinued operation, it was just lucky for Leuna. It is hard to
specify whether the selection was made only to help USSR produc-
tion and translate as much productive capacity as possible from
Leuna to the USSR, or whether the intention was to dismantle on
general principles and deliberately try to jeopardize operations
at Leuna. In any event, Leuna was large enough and resourceful
enough that it always stayed in business. For example, despite
the fact that most of the evaporators from the fertilizer plant
were shipped to the USSR, Leuna is nonetheless producing ammonium
sulfate fertilizer at the rate of 2000 tons/day, which is the same
range as the old production. The quality, of course, is poorer;
the crystals are smaller and the product mealy. However, a prod-
uct of former quality would limit production to 300 tons/day.

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9.

10.

34 per cent of the Leuna ammonia synthesis plant was dismantled and shipped to Severo-Donetsk.

In 1940 the ammonia production at Leuna was 1000 tons of fixed nitrogen/day, and the capacity was perhaps up to 2000 tons/day. Later, with increased coal hydrogenation, requiring dual use of compressors, gas generators, and purifiers, the capacity was decreased to about 1300 tons/day. During the war, after the bombing had started, the daily production was reduced to 800 tons of fixed nitrogen/day, although the capacity was still about 1300 tons/day. the production was about 720 tons/day. the Leuna synthesis gas capacity of 500,000-600,000 normal cubic meters/hr was reduced 100,000 by bombing and another 150,000 by dismantling, from which it could be concluded that 30-40% of the synthesis plant was dismantled. However, this figure applies only insofar as synthesis gas is concerned. Relatively speaking, the ammonia plant did not suffer as much as the hydrogenation and methanol plants. the ammonia production capacity of the dismantled equipment shipped to Severo-Donetsk would be about 300 tons of fixed nitrogen/day.

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11.

At Severo-Donetsk, it was apparent that work on the construction of the steam plant, which could be seen from the outside, was being pushed and almost completed.

an ammonia plant was to be erected in Severo-Donetsk, and the plant was actually undergoing installation. the technical installation was started brown gases from the oxides of nitrogen could be observed, but the source of ammonia at that time was from tank cars.

12.

hydrogen was intended for the ammonia synthesis plant at Severo-Donetsk

The intended source of hydrogen was from normal water gas generators. The water gas was to be produced from steinkohl, or hard coal, mined in the Donets coal basin.

13.

at Severo-Donetsk, products are being produced

Dr Herold, while working at the GIAP (Government Institute for Nitrogen Production) in Moscow, was asked by the Soviet Director to plan a research laboratory for Severo-Donetsk, for ammonia, nitric acid, ammonium nitrate, calcium nitrate, calcium ammonium nitrate or Leuna saltpeter, urea,

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methanol, isobutanol, and higher alcohols which were to be esterified to yield phthalic anhydride to produce plasticizers known by the trade name Palatinol.

14. [redacted] concerning Soviet plans for production at Severo-Donetsk?

[redacted] ammonium nitrate would be the main item of production, ammonium nitrate is not a particularly good fertilizer. It would, however, find uses in industrial explosives. [redacted]

15. [redacted]

16. [redacted] quartz floats used for measuring the concentration of heavy water. [redacted]

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During the war these floats were purchased, perhaps from Schotte und Genossen, in Jena. After the war they were no longer available, and [redacted] Col Petrianov, the Soviet chief, tried his luck at blowing them. They were very simple and primitive, roughly tear-drop in shape, with bulb diameters of about 0.5 inches, and about 1 inch long. [redacted]

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[redacted] There were at least 2-4 sets, perhaps 6 altogether. All measurements were made at a temperature of 20°C. About 6 Hoeppler thermostats were available, but not all were in working order.

17. [redacted]

All of the sets at Leuna were taken to the Karpov Institute in Moscow.

18. [redacted]

ranges of H₂O concentration [redacted]

[redacted] the quartz floats were used. [redacted] each set covered the entire range, with relatively more floats for the lower range.

19. [redacted]

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